

## Comments on Potential 1999 EWA Operations for the Delta Smelt (From an operator's viewpoint)

It is a good idea to provide a review of the 1999 operations for the delta smelt and also an evaluation of how an EWA would have worked in 1999. I think that it would be worthwhile for the group to set aside some time and do a more thorough evaluation for the decision makers. The papers "EWA and Delta Smelt" and "Data on Delta Smelt Salvage at South Delta Pumping Plants in Spring and Early Summer" provided a lot of good data, but I would like to add a few thoughts.

The EWA may have been more limited to what it could have achieved than described in the above papers. A great part of the potential beneficial use of the EWA for the delta smelt would have been through any benefit provided by increasing Delta inflows, either north or south of the Delta. Operations of the EWA for export reductions may have been severely hampered by the lack of EWA storage south of the Delta prior to April and the limited opportunities to move EWA water between April and the San Luis low point in August. The EWA certainly has the potential to assist in the recovery of impacts before the summer of water year 2000 through the use of tools such as E/I relaxation, joint point, expanded banks, and water acquisitions. I think that this year would definitely fall under one of the tougher years for an EWA to operate.

The availability of EWA water south of the Delta would have been the greatest challenge this year. San Luis was full at the beginning of the pulse flow period in April. I do not know how much EWA water we could have had in other storage this year and withdrawal from ground water sources may not have been at an adequate rate to make up for almost 500 TAF of export impact before the low point. In June, export impacts were accumulating at a rate of about 5,000 cfs/day. Could we have anticipated this export impact soon enough to begin moving EWA water?

- I do not believe that the delta smelt pattern was typical or predictable this year. The continuing large salvage of smelt at Skinner appeared to baffle many. The length of time that the smelt appeared to linger in the central and south Delta appeared to exceed expectations for this type of year classification.
- The San Joaquin River flows were higher than normal rather than "low" as noted in the EWA and Delta Smelt paper. The same applies to QWEST flows and Delta outflows with flows being higher than normal for this time of year.
- At the beginning of the VAMP, exports were in accordance with the delta smelt biological opinion, roughly 3,400 cfs. For the last 3 days of the VAMP, the exports were

dropped to about 3,000 cfs.

- Additional EWA flows into the Delta may have moved the fish away from the zone of influence of the pumps, potentially reducing the salvage of delta smelt and the amount of time that export restrictions were needed. This makes a direct assessment of the volume of EWA water needed to offset export restrictions difficult.

- Could VAMP have been delayed? Hindsight is nice, but the delta smelt salvage was beginning to increase in the first week of April. (Although, additional inflow may have moved the fish in early April.) Delaying VAMP has logistics problems without significant lead time. Much coordination with the San Joaquin operators must be accomplished and DFG must prepare the fish for release for the planned VAMP date.

- With the severe restriction in export level moving into the peak irrigation season, San Luis Reservoir was experiencing a high rate of draw down. This caused concern over dam and embankment stability. Additional studies are being performed by Reclamation and DWR to determine a maximum desirable rate of water surface draw down.

- It appears that even with the current export reductions, we will get by the San Luis low point this year. This reinforces gaming scenarios in which San Luis EWA was negative in August, if the low point was not constraining. The best available forecast of the water demands is essential for this.

- Demand shifting must be looked at in the big picture. Shifting the demand of one user may increase the demand of another user, resulting in no net overall benefit.

- Uncertainty over export level leads to difficulty in determining Delta inflow needs and reservoir release requirements. Also, constraints in power scheduling makes real time, day to day operation of the export facilities difficult. These contribute to impacts which have not been modeled.

- EWA purchases north of the Delta may help offset the impact in San Luis later in the year. Available export capacity may be very limited although relaxation of Banks export capacity would help out.

- Would an EWA operation have placed a limit on the amount of export restrictions which could have occurred in 1999, based on the EWA water available south of the Delta and low point projections?